Amendments to the Claims

Claims 1-7, 9-16 and 18-21 are pending in the application. Claims 1, 9, 11, 18 have been amended and claims 8 and 17 have been cancelled.

Listing of Claims:

1   1.   (Currently Amended) A method of converting from a sub-sampled color
2   image in a first color space format to a full color image in a second color space format
3   comprising:
4   transforming the sub-sampled color image in the first color space format to the
5   second color space format; and
6   upscaling at least one color plane of the transformed image, the one color plane
7   corresponding to one of the color space dimensions of the second color space format, to
8   provide the full color image in the second color space format, wherein upscaling
9   comprises applying an Inverse discrete wavelet transform to an image decomposed into
10   subbands, at least one of the subbands comprising the at least one color plane of the
11   transformed image.

1   2.   (Original) The method of claim 1, wherein the first color space format is
2   the RGB color space format.

1   3.   (Original) The method of claim 2, wherein the second color space format
2   is the Y-Cr-Cb 4:2:0 color space format.

1   4.   (Original) The method of claim 1, wherein the first and second color
2   space formats comprise two different luminance-chrominance color space formats.

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5. (Original) The method of claim 1, wherein transforming comprises applying a relationship to at least one pixel value of the image in the first color space format to obtain a pixel value in the second color space format.

6. (Original) The method of claim 5, wherein transforming comprises applying the relationship to more than at least one pixel value of the image in the first color space format.

7. (Original) The method of claim 5, wherein the relationship is substantially in accordance with the following equations:

$$Y(I,J) = 0.299R(I,J) + 0.587G(I,J) + 0.114B(I,J)$$

$$Cr(I,J) = -0.169R(I,J) - 0.331G(I,J) + 0.500B(I,J)$$

$$Cb(I,J) = 0.500R(I,J) - 0.419G(I,J) - 0.081B(I,J)$$

where R,G, and B denote different color planes in the RGB color space format, Y, Cr, and Cb denote different color planes in the Y-Cr-Cb 4:2:0 color space format, and I,J denote pixel locations.

8. Cancelled.

9. (Currently Amended) The method of claim 8 1, wherein the at least one of the subbands comprises an LL subband of the decomposed image.

10. (Original) The method of claim 8, wherein the remaining subbands of the decomposed image comprise only zeros.

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1   ~~11.~~   (Currently Amended) An article comprising: a storage medium having

2   stored thereon instructions to convert from a sub-sampled color image in a first color

3   space format to a full color image in a second color space format, the instructions, when

4   executed by a system, resulting in:

5   transforming the sub-sampled color image in the first color space format to the

6   second color space format; and

7   upscaling at least one color plane of the transformed image, the one color plane

8   corresponding to one of the color space dimensions of the second color space format, to

9   provide the full color image in the second color space format, wherein the instructions,

10 when executed, further result in upscaling at least one color plane comprising applying

11 an Inverse discrete wavelet transform to an image decomposed into subbands, at least

12 one of the subbands comprising the at least one color plane of the transformed image.

1   ~~12.~~   (Original) The article of claim ~~11~~ 10, wherein the first color space format is

2   the RGB color space format.

1   ~~16.~~   (Original) The article of claim ~~12~~ 11, wherein the second color space format

2   is the Y-Cr-Cb 4:2:0 color space format.

1   ~~14.~~   (Original) The article of claim ~~11~~ 10, wherein the first and second color

2   space formats comprise two different luminance-chrominance color space formats.

1   ~~15.~~   (Original) The article of claim ~~11~~ 10, wherein the instructions, when

2   executed, further result in transforming the color image comprising applying a

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3   relationship to at least one pixel value of the image in the first color space format to
4   obtain a pixel value in the second color space format.

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16.   (Original) The article of claim 14, wherein the instructions, when
executed, further result in the relationship being applied substantially in accordance with
the following equations:

$$Y(I,J) = 0.299R(I,J) + 0.587G(I,J) + 0.114B(I,J)$$

$$Cr(I,J) = -0.169R(I,J) - 0.331G(I,J) + 0.500B(I,J)$$

$$Cb(I,J) = 0.500R(I,J) - 0.419G(I,J) - 0.081B(I,J)$$

where R,G, and B denote different color planes in the RGB color space format, Y, Cr,
and Cb denote different color planes in the Y-Cr-Cb 4:2:0 color space format, and I,J denote
pixel locations.

17.   Cancelled.

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18.   (Currently Amended) The article of claim 17 11, wherein the instructions,
when executed, further result in the at least one of the subbands comprising an LL
subband of the decomposed image.

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19.   (Original) The article of claim 18 16, wherein the instructions, when
executed, further result in the remaining subbands of the decomposed image comprise
only zeros.

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20.   (Original) A method of converting a subsampled color image transformed
to a selected color space format to a full color image in the selected color space format
comprising:

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4   appending zero subbands to at least one of the color planes of the transformed

5   color image so that the at least one of the color planes forms an LL subband of a

6   decomposed image and the appended subbands form LH, HL, and LL subbands of a

7   decomposed image; and

8   applying the inverse discrete wavelet transform to the decomposed image so as

9   to form the full color image in the selected color space format.

1   21. (Original) The method of claim 20, wherein the selected color space

2   format comprises the Y-Cr-Cb 4:2:0 color space format.